Factors influencing mothers' decisions to consult a general practitioner about their children's illnesses

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SUMMARY

Background. *In the management of childhood illness only a small proportion of symptoms result in a medical consultation.*

Aim. *This pilot study set out to assess the influence of sociodemographic factors, social network, reason for choice of doctor and contact with allied health professionals on mothers' decisions to consult a general practitioner about their children's illnesses.*

Method. *In one suburb of Melbourne, Australia all mothers with children aged 11 to 26 months were identified from the maternal and child health centre register. Mothers were invited for interview and if they attended were asked to keep a health diary for their child for four weeks. Logistic regression was used to test a multivariate model of factors predicting consultation with the general practitioner.*

Results. *A total of 150 mothers were identified. Interviews were carried out with 81% of target mothers and diary data collected for 72% of target children. Over the four-week diary period, consultation rates with the general practitioner were significantly higher if symptoms were recorded on 15 days or more, or the general practitioner had been recommended by a friend or was the mother's own doctor before the child's birth. Contact with a maternal and child health nurse was also a significant predictor of medical contact. Contact with friends and relatives, whether or not the study child was the first child in the family, mother's education, husband's occupational status or contact with a chemist were not significantly related to medical consultation rates.*

Conclusion. *Choice of doctor (current doctor same as doctor before birth of child, or doctor recommended by a friend) resulted in significantly more consultations as did contact with a maternal and child health nurse. These factors would seem to require further study and inclusion in future models of consulting behaviour.*

Keywords: general practitioner utilization; patient choice of doctor; parental attitude; consultation rates; sociodemographic factors; infants.

Introduction

IN the management of childhood illness only a small proportion of symptoms are followed by a medical consultation. Most children's symptoms are dealt with within the family, using advice from relatives, friends and paramedical sources such as pharmacists and nurses.[1-4]

The likelihood of consulting a doctor has been linked to sociodemographic factors,[2] although in a study of consultation for childhood cough, Wyke and colleagues found that the link between social class and consultation disappeared when severity of cough symptoms was controlled for.[5] Consultation is more likely if the child is the first child in the family.[6] Studies have also suggested that individuals with friendship-based social networks consult more than those with predominantly relation-based networks.[7,8]

Advice from other health professionals is used in responding to symptoms in children. Up to 50% of consultations for infants' illnesses have been found to be with practitioners other than family doctors.[9,10] Cunningham-Burley and Maclean found that mothers reported using local chemists as sources of advice, for differential diagnosis, as an alternative to the doctor, and as a stepping stone to the doctor.[11] In Australia, mothers may also consult maternal and child health nurses[12] whose role is similar to that of health visitors and practice nurses in the United Kingdom.

Qualitative studies of what happens in a medical consultation show that many people are concerned with whether the general practitioner will be sympathetic to their decision to consult or whether they will be seen as wasting the doctor's time.[4] Hjortdahl and Laerum found that patients' perception of their current doctor as their 'personal doctor' was strongly linked to patient satisfaction and frequency of contact with the doctor.[13]

This pilot study set out to investigate whether consultation rates for children over a four-week period were related to the factors described above and whether choice of general practitioner based on recommendations from friends or professional sources led to a greater likelihood of consultation than a utilitarian reason for choice of doctor, such as geographical proximity.

Method

The study took place in one suburb of Melbourne, Victoria, Australia between March and August 1988. All mothers with a child aged between 11 and 26 months were identified from the maternal and child health centre register. This register covered all women living in the study area at the time of their child's birth who were still living there at the time of the study. The mothers were contacted by telephone by L O. If willing, they were interviewed in their own homes by L O, using an open-ended, semi-structured questionnaire, which covered mother's education, ethnic background, usual contact with relations and friends, reason for choosing general practitioner, and partner's employment. The mothers were then asked to keep a health diary for the next four weeks, noting any symptoms and medical and paramedical consultations for the study child.[14]

The total number of days when symptoms were recorded and the number of contacts with doctors, nurses and chemists during the study period were determined from the diary data. Contact with a chemist was noted only if the chemist's advice or recommendation had been asked for (simple purchases were excluded).

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The chi square test was used for initial analyses. Logistic regression was used in the multivariate analysis of consultation rates with the general practitioner.[15]

Results

A total of 150 mothers were identified; 121 (80.7%) agreed to be interviewed. Of the 121 children surveyed 54.5% were the first child in the family. The 121 mothers surveyed were ethnically and educationally representative of the population of Victoria: 14.9% of study mothers had a non-English speaking background compared with 11% for the overall population[16] and 59.5% of the mothers had post-school qualifications compared with 54% of Victorian women in the same age range (between 18 and 45 years).[16] However, more study women had partners who were in white collar occupations (69.4%) than the overall rate for men in Victoria (48%).[16]

The four-week diary was completed by 108 mothers (72.0%). This sample size has 80% power to detect differences between subgroups of between 12% and 20%, depending on the size of the smaller proportion.[17] There were no significant differences between the 108 mothers completing and the 13 not completing the diary with respect to mother's education, English as a first language or partner in a white collar occupation.

The mean number of days on which symptoms were noted in the 108 diaries was 12.3 (95% confidence interval 11.6 to 13.0). Over the four weeks 41 mothers (38.0%) consulted a doctor at least once with the study child. Analysis showed a significant relationship between the number of days on which symptoms were noted and whether or not a general practitioner was consulted: of the 33 mothers recording symptoms on up to seven days 15.2% consulted a general practitioner with their child in the four-week period, of the 39 mothers recording symptoms on eight to 14 days 38.5% consulted a doctor, and of the 36 mothers recording 15 or more days with symptoms 58.3% consulted a doctor ($\chi^2 = 13.6$, 2 degrees of freedom (df), $P<0.001$).

Of the 19 mothers who contacted a maternal and child health nurse about their child in the study period, 63.2% consulted a doctor, and of the 89 who did not contact a nurse 32.6% consulted a doctor ($\chi^2 = 5.0$, 1 df, $P<0.05$). Of the 22 mothers who contacted a chemist for advice 59.1% consulted a doctor in the study period, while of the 86 who did not contact a chemist 32.6% consulted a doctor ($\chi^2 = 4.2$, 1 df, $P<0.05$).

The percentage of mothers consulting a general practitioner in the study period ranged from 64.3% among those whose general practitioner had been their own doctor before their child's birth to 14.3% of those who had chosen their doctor on utilitarian grounds ($\chi^2 = 13.1$, 5 df, $P<0.01$) (Table 1).

Only five of the 121 women in the sample had less than monthly contact with any friend or relative. All five of these mothers had completed the diary; two had contacted a general practitioner in the four-week study period. Of the 69 mothers who saw their own mothers fortnightly or more often 43.5% had consulted a general practitioner in the study period compared with 28.2% of the 39 mothers who saw their own mothers less often (difference not significant). No relationship was found between contact with other relatives and friends and consultation rate with a doctor.

Among the 108 mothers, the consultation rate with general practitioners during the four-week study was not significantly related to whether or not the study child was the first child in the family, mother's education, mother's ethnic background or partner's occupation.

The preliminary chi square analyses showed that general practitioner consultation rates were significantly related to number of days symptoms were noted over the study period, nurse contact, chemist contact and reason for choice of doctor. As it was likely that these variables were interrelated, logistic regression was used to test a model that considered all the significant factors simultaneously. A model of simple independent effect (forward stepwise fitting) on medical consultation was found to fit successfully for number of days symptoms were recorded, reason for choice of doctor (collapsed into four categories) and nurse contact (Table 2). Within 'reason for choice of doctor', only 'own doctor before child's birth' and 'recommendation of friend' differed significantly from the 'utilitarian' baseline. Therefore the remaining 'recommendation' categories were collapsed. Contact with a chemist was found to be strongly dependent on the number of days symptoms were recorded and to have no significant independent effect as a predictor of consultation rate.

In interviews, mothers were asked when they would seek advice from the maternal and child health nurse and from the chemist. Mothers reported seeking advice from the nurse for a child's teething, feeding and sleeping problems, and when the mother wanted to check whether a symptom necessitated a visit to the general practitioner. Advice from the chemist was sought for rashes and skin conditions, and when prescriptions were being made up. Chemists were rarely asked for advice as to whether or not a general practitioner should be consulted.

Discussion

For 38% of children in this study a general practitioner consultation was made at least once in the four-week study. Australian health survey[18] figures give a comparable consulting rate per two-week period of 25%. Mothers were most likely to consult a doctor when a child had had symptoms on more than 14 days.

Table 1. General practitioner consultation rate over the four-week study period, by reason for choice of doctor.

Reason for choice of GP	% of mothers consulting a GP in study period
Own doctor before child's birth ($n = 14$)	*64.3*
Recommendation of friend ($n = 26$)	*53.8*
Recommendation of maternal and child health nurse ($n = 16$)	*31.3*
Other recommendation ($n = 15$)[a]	*33.3*
Doctor of partner or partner's family ($n = 16$)	*31.3*
Utilitarian ($n = 21$)[b]	*14.3*

n = number of mothers in group. [a]For example, recommendation to new doctor on retirement of family doctor. [b]For example, geographical proximity.

Table 2. Predictors of consultation rate with general practitioner.

Variable	Baseline category	Comparison category	Odds ratio (95% CI)[a]
Choice of GP	Utilitarian	Recommendation[b]	3.7 (–0.8 to 16.4)
		Friend[c]	10.8 (2.2 to 56.8)
		Self[d]	12.7 (2.1 to 76.7)
Contact with nurse	No contact	Contact	3.8 (1.6 to 12.8)*
Number of days symptoms recorded	0–7	8–14	3.0 (–0.9 to 11.0)
		15+	10.4 (2.8 to 38.2)*

CI = confidence interval. [a]If the confidence interval does not include unity the result is significant at the 0.05 level (*$P<0.05$). [b]Recommendation of maternal and child health nurse, other recommendation, or doctor of partner or partner's family. [c]Recommendation of friend. [d]Own doctor before child's birth.

However, mothers who had made their choice of doctor following a friend's recommendation, or used their own doctor, were significantly more likely to consult, independent of symptom levels. It has been shown that 'doctor-defined seriousness' of child health problems is more significant in predicting consultation than actual frequency of symptoms observed.[3]

It seemed that choosing a doctor following a friend's recommendation meant that the doctor was viewed as being sympathetic and competent, ready to listen to mothers' concerns, and not prone to imply that visits were unjustified. That recommendation from a friend was as powerful a predictor of consultation rate as the effect of having a long-term pre-child relationship with the doctor suggests that it is not the length of the doctor–patient relationship that is the important factor but the perceived sympathy of the doctor. It also seemed that starting a family was a point at which mothers felt able to change their doctor with apparent legitimacy, an otherwise difficult act. To continue to consult the doctor they had seen before the child's birth was an expression of confidence in that doctor.

Mothers who contacted a maternal and child health nurse during the survey period were more likely to consult their general practitioner than those who did not. In the interviews it was found that mothers reported checking with the nurse whether it was 'worth bothering' the doctor. Contact with a chemist was not found to be a predictor of consultation rate in the regression model. The interviews confirmed that chemists in this study were used for advice, as reported in a previous study.[11] The advice often came after the consultation when a prescription was being filled. Chemists were not usually used as advisers on when to consult.

The findings of other studies, that type of social network and frequency of contact with friends and relatives predicts medical consultation rates,[7,8] were not replicated in this study. Contact with own mother was suggestive of a relationship with general practitioner consultation rate but the present study lacked the power to show significance for an effect of this size (a sample of 142 mothers would have been needed to detect a significant difference at the 0.05 level).

Patients' attitudes to their doctors are difficult for them to express and for a researcher to quantify. The present study is small and exploratory. However, even with these drawbacks, mothers' perceptions of how they chose their child's doctor was found to be a powerful predictor of consultation. This factor would seem worthy of further investigation.

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